

What is claimed is:

1. A fruit-juice based beverage composition comprising:
 - (a) a source of protein in an amount up to about 10 wt% of the composition;
 - (b) a source of carbohydrate in an amount up to about 30 wt% of the composition;
 - (c) a source of edible acids in an amount up to about 3 wt% of the composition;
 - (d) a source of fruit juices in an amount from about 5 to about 40 wt% of the composition.
2. The composition of claim 1 wherein the composition is clear, has a pH of 4.0 or less, and has a viscosity of less than about 40 centipoises.
3. The composition of claim 2 the composition has a viscosity of less than 20 centipoises.
4. The composition of claim 1 wherein the source of fruit juices is in an amount from about 10 to about 40 wt%.
5. The composition of claim 1 wherein the source of carbohydrate comprises from about 5 to about 25 wt% of the composition.
6. The composition of claim 1 wherein the source of carbohydrate comprises from about 8 to about 20 wt% of the composition.
7. The composition of claim 1 wherein the source of protein comprises from about 2 to about 8 wt% of the composition.
8. The composition of claim 1 wherein the source of edible acids comprises from about 2 to about 7 wt% of the composition.

9. The composition of claim 1 wherein the protein source comprises at least one protein selected from the group consisting of whey protein isolate and whey protein hydrolysate.

5 10. The composition of claim 1 wherein the protein source is a combination of whey protein isolate and whey protein hydrolysate, and wherein whey protein hydrolysate comprises up to 20 wt% of the combination.

10 11. The composition of claim 1 wherein the carbohydrate source comprises at least one carbohydrate selected from the group consisting of sucrose, fructose, HFCS 42, HFCS 55 and maltodextrin.

15 12. The composition of claim 1 wherein the source of carbohydrate is a combination of maltodextrin and at least one other carbohydrate selected from the group consisting of sucrose, fructose, HFCS 42, and HFCS 55, and wherein maltodextrin comprises up to about 25 wt% of the combination.

20 13. The composition of claim 1 wherein the source of edible acids comprises at least one edible acid selected from the group consisting of citric acid, phosphoric acid, and malic acid.

25 14. The composition of claim 1 wherein the source of edible acids comprises a combination of malic acid and at least one other edible acid selected from the group consisting of citric acid and phosphoric acid, and wherein malic acid comprises up to about 30 wt% of the combination.

30 15. The composition of claim 1 further comprising from about one-tenth to about three times the recommended daily allowance of one or more minerals.

16. The composition of claim 1 further comprising at least one mineral selected from the group consisting of calcium, potassium, magnesium, iron, sodium, iodine, molybdenum, chromium, selenium, zinc, and copper.

5 17. The composition of claim 1 further comprising at least one water-soluble vitamin.

10 18. The composition of claim 1 further comprising at least one vitamin selected from the group consisting of vitamin A, vitamin B1, vitamin B2, vitamin B6, vitamin B12, vitamin C, vitamin D, vitamin E, panthotenic acid, biotin, folic acid, and niacin.

15 19. The composition of claim 1 further comprising up to about 5 wt% of the composition of at least one fiber selected from the group consisting of pectin, cellulose gum, xanthan gum, gum arabic, polydextrose, inulin, and arabinogalactan.

20 20. The composition of claim 1 further comprising up to about 5 wt% of the composition of at least one fiber selected from the group consisting of polydextrose, inulin, and arabinogalactan.

25 21. The composition of claim 1 further comprising from about 0.5 wt% to about 4 % of the composition of at least one fiber selected from the group consisting of polydextrose, inulin, and arabinogalactan

22. The composition of claim 1 further comprising up to about 0.1 wt% of the composition of at least one fiber selected from the group consisting of pectin, cellulose gum, xanthan gum, and gum arabic.

30 23. The composition of claim 1 wherein the protein source is whey protein isolate.

24. The composition of claim 1 wherein the carbohydrate source is a combination of sucrose and fructose.

25. A process for producing a juice based beverage, the process comprising the steps of:

- forming a protein slurry;
- forming an aqueous solution containing carbohydrates;
- mixing the protein slurry and carbohydrate aqueous solution;
- adding edible acids to the mixture of the protein slurry and the carbohydrate solution;
- adding fruit juice to the mixture in amounts sufficient to form from about 5 to about 40 wt% of the final composition;
- adjusting the brix, pH, and temperature of the mixture; and
- pasteurizing the mixture

26. The process of claim 25 further comprising the step of adding minerals and vitamins to the mixture of protein, carbohydrate, edible acids and fruit juice.

27. The process of claim 25 further comprising adding fibers to the mixture of protein, carbohydrate, edible acids and fruit juice.

28. The process of claim 25 wherein the step of forming the protein slurry comprises mixing a protein selected from the group consisting of whey protein isolate and a combination of whey protein isolate and whey protein hydrolysate, in amounts sufficient to form up to about 10 wt% of the final composition, with water.

29. The process of claim 25 wherein the step of forming an aqueous solution containing carbohydrates comprises dissolving a carbohydrate selected from the group consisting of sucrose, fructose, HFCS 42, HFCS 55, combinations of sucrose, fructose, HFCS 42, and HFCS 55, and

combinations of maltodextrin with another carbohydrate selected from the group consisting of sucrose, fructose HFCS 42, and HFCS 55 in water, wherein the carbohydrate is from about 1 to about 30 wt% of the final composition.

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30. The process of claim 25 wherein the step of adding edible acids to the mixture of the protein slurry and the carbohydrate solution comprises adding to the mixture an edible acid selected from the group consisting of citric acid, phosphoric acid, combinations of citric acid and phosphoric acid, and combinations of malic acid with another edible acid selected from the group consisting of citric acid and phosphoric acid, wherein the malic acid comprises from about 0.1 to about 50 wt% of the combination, in amounts sufficient to form from about 0.01 to about 3 wt% of the final composition.

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31. A process for producing a juice based beverage composition, the process comprising the steps of:

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(a) mixing a protein selected from the group consisting of whey protein isolate and a combination of whey protein isolate and whey protein hydrolysate in amounts sufficient to form from about 0.5 to about 10 wt% of the final composition with water to form a protein slurry;

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(b) dissolving a carbohydrate selected from the group consisting of sucrose, fructose, HFCS 42, HFCS 55, combinations of sucrose, fructose, HFCS 42, and HFCS 55, and combinations of maltodextrin with another carbohydrate selected from the group consisting of sucrose, fructose HFCS 42, and HFCS 55, the carbohydrate in amounts sufficient to form from about 1 to about 30 wt% of the final composition, in water;

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(c) mixing the protein slurry and carbohydrate solution;

(d) adding an edible acid selected from the group consisting of citric acid, phosphoric acid, combinations of citric acid and phosphoric acid, and combinations of malic acid with another edible acid selected from the group consisting of citric acid and phosphoric acid, wherein the malic acid comprises from about 0.1 to about 50 wt% of the combination, in amounts sufficient to form from about 0.01 to about 3 wt% of the final composition to the mixture of protein slurry and carbohydrate solution;

(e) adding one or more fruit juices in amounts sufficient to form from about 5 to about 40 wt% of the final composition to the mixture of protein slurry and carbohydrate solution;

(f) forming a solution containing one or more minerals in amounts sufficient to supply from about one-tenth to about three times the recommended daily allowance of the minerals;

(g) adding the mineral solution to the mixture of protein slurry and carbohydrate solution;

(h) forming a solution containing one or more vitamins and optional flavors in amounts sufficient to supply from about one-tenth to about two times the recommended daily allowance of the vitamins;

(i) adding the vitamin solution with optional flavors to the mixture of protein slurry and carbohydrate solution;

(j) adjusting the brix of the resulting mixture to from about 15 to about 20% with water;

(k) adjusting the pH of the resulting mixture to less than about 4.0;

(l) adjusting the temperature of the resulting mixture to from about 40°F to about 60°F (10°C to 15°C);

(m) transferring the resulting mixture to sealable containers;

(n) sealing the containers to produce a pressurized container containing the resulting mixture; and

(o) pasteurizing the resulting mixture.